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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/523,069

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EXAMINER

BELLINGER, JASON R

ART UNIT

PAPER NUMBER

3617

MAIL DATE

DELIVERY MODE

11/09/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/523,069	Applicant(s) TANNO, ATSUSHI	
	Examiner Jason R. Bellinger	Art Unit 3617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 July 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) 3-7 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-2, 8-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claim 1 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The limitation in lines 8-11 of claim 1, setting forth that the ring-like element increases the natural frequency of the wheel such that the natural frequency of the wheel is in a higher frequency band than that of the tire, is not present in the specification as originally filed. Therefore, this limitation is considered to be new matter.

Claim Rejections - 35 USC § 103

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
4. Claims 1 and 8-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Martinoli in view of Atwell, Jr. and in further view of Archibald. Martinoli shows a disk wheel, wherein the rim 12 includes inboard and outboard bead seats with a bead hump and radially outwardly extending flanges 17-18. A solid and continuous single

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ring-like element 22k (see Figure 14) extends circumferentially around the wheel, and may be provided on a portion of the bead seat located between the hump and the flange of the rim 12 (in this case ring element 22k would be substituted for rib 22 shown in Figure 4). The ring-like element 22k protrudes inwardly from the radially inner surface of the rim 12, and could be the only ring-like element provided thereon (see column 2, lines 61-65). The wheel is formed of magnesium or aluminum or another lightweight metal. As shown in Figure 4, the surfaces of the ring-like element 22 (and specifically portion 23) are co-planar with the surfaces of the rim flange 17. The co-planar surface is generally orthogonal to the central rotational axis of the wheel.

Martinoli does not specify that the cross-sectional area of the ring element 22k is 0.1-0.4 times larger than the cross-sectional area of the thickness of the rim flange plus the width-wise length of the bead seat multiplied by the thickness of the rim adjacent the hump. However, it would have been obvious to one of ordinary skill in the art at the time of the invention to form the ring-like element of Martinoli with a thickness sufficient to prevent the weight 21f from being dislodged during operation, and to serve as a reinforcing rib to distribute forces imparted on the rim.

Martinoli does not show the ring-like element being located at the inboard bead seat of the rim 12. Atwell, Jr. teaches the use of a ring-like element 20 located at the inboard bead seat of a wheel 10. Therefore, from this teaching, it would have been obvious to one of ordinary skill in the art at the time of the invention to form the ring-like element of Martinoli at the inboard bead seat area of the rim, for the purpose of increasing the aesthetic appearance of the wheel by moving balance weight from the

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exterior surface of the wheel, and further to protect the balance weight from damage and/or removal in the event of contact with an obstacle such as a curb.

Martinoli as modified by Atwell, Jr. does not show only a single ring-like element located on the rim. Archibald teaches the use of a wheel having a rim with a single ring-like element 64. Therefore from this teaching, it would have been obvious to one of ordinary skill in the art at the time of the invention to form the wheel of Martinoli as modified by Atwell, Jr. with only a single ring-like element thereon in order to reduce the complexity of the design of the wheel, thus reducing maintenance costs, and further reduce the weight of the wheel. Namely, one of ordinary skill in the art at the time of the invention would have found the use of a known technique to improve similar devices in the same way would yield predictable results. In this case, Archibald teaches providing only a single ring-like element on a rim, which would reduce the overall weight of the wheel. Atwell, Jr. shows a rim having a pair of ring-like elements. One of ordinary skill in the art would find it obvious to remove the second ring-like element of Martinoli as modified by Atwell, Jr. in order to reduce the weight of the wheel. See *KSR International Co. v. Teleflex Inc.* 550 U.S. ___, 82 USPQ2d 1385 (April 30, 2007).

The limitation of the ring-like element increasing the natural frequency of the wheel to be in a frequency band higher than that of a tire mounted on the wheel is considered to be new matter (see section 2 above), and therefore Martinoli as modified by Atwell, Jr. and Archibald is considered to meet this limitation, inasmuch as the Applicant's invention.

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5. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Atwell, Jr. in view of Archibald. In Figures 4 and 4A, Atwell, Jr. shows a disk wheel 10 with a rim 16 located at the peripheral edge of the disk 14. The rim 16 includes inboard and outboard bead seats with a protruding hump and radially outwardly extending flanges. A ring-like element 18 circumferentially extends from the rim 16, and is located between the hump and inboard rim flange. The inboard annular rim flange includes an inboard facing surface that is generally co-planar with an inboard facing surface of the ring-like element 18^A. The ring-like element 18 is only provided on the inboard bead seat portion.

Atwell, Jr. does not specify that the cross-sectional area of the element 18 is 0.1-0.4 times larger than the cross-sectional area of the thickness of the rim flange plus the width-wise length of the bead seat multiplied by the thickness of the rim adjacent the hump. It would have been obvious to one of ordinary skill in the art at the time of the invention to form the ring-like element of Atwell, Jr. with a thickness sufficient to prevent the weight 26 from being dislodged during operation, and to serve as a reinforcing rib to distribute forces imparted on the rim.

Atwell, Jr. does not show only a single ring-like element located on the rim. Archibald teaches the use of a wheel having a rim with a single ring-like element 64. Therefore from this teaching, it would have been obvious to one of ordinary skill in the art at the time of the invention to form the wheel of Atwell, Jr. with only ring-like element 18 thereon in order to reduce the weight of the wheel. Namely, one of ordinary skill in the art at the time of the invention would have found the use of a known technique to improve similar devices in the same way would yield predictable results. In this case,

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Archibald teaches providing only a single ring-like element on a rim, which would reduce the overall weight of the wheel. Atwell, Jr. shows a rim having a pair of ring-like elements. One of ordinary skill in the art would find it obvious to remove the second ring-like element 18 of Atwell, Jr. in order to reduce the weight of the wheel. See *KSR International Co. v. Teleflex Inc.* 550 U.S. ___, 82 USPQ2d 1385 (April 30, 2007).

^A While Atwell, Jr. does not show the inboard facing surface of the inboard annular rim flange being completely and continuously co-planar with the inboard facing surface of the ring-like element 18; the inboard surfaces of the rim flange and ring-like element both fall completely and continuously within the plane that encompasses the rim flange in its entirety, which meets the limitation of the claim. However, in the alternative, it would have been obvious to one of ordinary skill in the art at the time of the invention to form the rim flange and ring-like element of Atwell, Jr. with vertically extending inboard faces, as a substitute and equivalent configuration, as is known in the art (see for example, the inboard faces of the rim flange and ring-like element of Archibald).

Response to Arguments

6. Applicant's arguments filed 13 July 2009 have been fully considered but they are not persuasive. The Applicant inquires about whether the previous office action was a final or non-final office action. It is unclear what the desired status of the previous office action was meant to be; therefore the status in PALM/PAIR of non-final is deemed appropriate.

The Applicant argues that the limitations defined in lines 8-11 of claim 1 are not new matter and argues that paragraphs [0003], [0006-0007], and [0021-0022] of the specification support the claimed features. However, the above-mentioned sections of the specification do not set forth the specific language of the claim limitation of lines 8-11 of claim 1. Instead, the above-mentioned sections of the specification only discuss generic theories which may or may not relate to the claimed invention. Therefore, the limitations defined in lines 8-11 of claim 1 are still considered to be new matter.

The Applicant further argues that the references do not specifically disclose the nature of the natural frequency of the wheel with respect to that of the tire. First, this limitation is still deemed new matter, and thus the references are considered to show this feature inasmuch as the Applicant's invention. Second, the KSR decision (*KSR International Co. v. Teleflex Inc.* 550 U.S. 398, 415 (2007)) precludes the need for references to specifically point out all features of the claims. In this case, one of ordinary skill in the art at the time of the invention would have found moving the location and structure of a ring-like element to affect the natural frequency of wheel with respect to the tire a predictable mechanical expedient. Third, the Applicant has not provided any evidence to support non-obviousness of this claimed limitation.

Regarding the arguments of the rejection of claim 12 under Atwell, Jr. and Archibald: The rejection above has been expanded to more clearly define how the references meet the limitations of the claim.

The Examiner retains the response to arguments set forth in the previous office action regarding all other arguments.

Conclusion

7. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason R. Bellinger whose telephone number is 571-272-6680. The examiner can normally be reached on Mon - Thurs (9:00-4:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Morano can be reached on 571-272-6684. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jason R Bellinger/
Primary Examiner
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